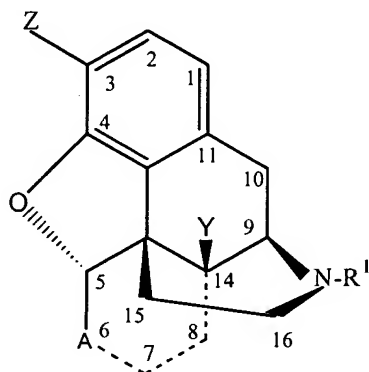


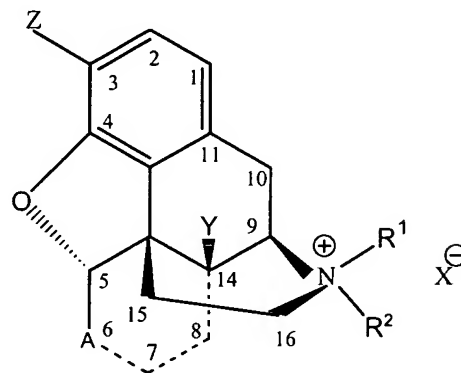
## AMENDMENTS TO THE SPECIFICATION:<sup>1</sup>

Please replace paragraph [0009] with the following amended paragraph:

[0009] In one embodiment, the ternary morphinan alkaloid base is represented by Formula 1 and the product is presented by ~~Formula 1A~~. **Formula 1A:**



Formula 1



Formula 1A

wherein

Please replace paragraph [0010] with the following amended paragraph:

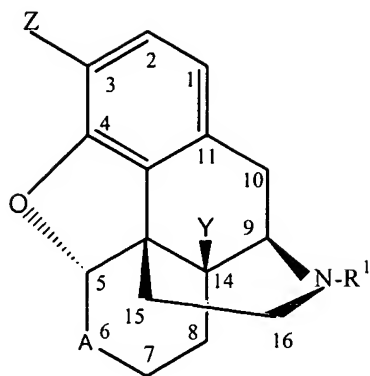
[0010] A is -C(O)-, -C(S)-, -C(=CH<sub>2</sub>)-, ~~[[(-CHA<sub>1</sub>- or -CA<sub>1</sub>=)]~~ **-CH(A<sub>1</sub>)-, or -C(A<sub>1</sub>)=**,

Please replace paragraph [0018] with the following amended paragraph:

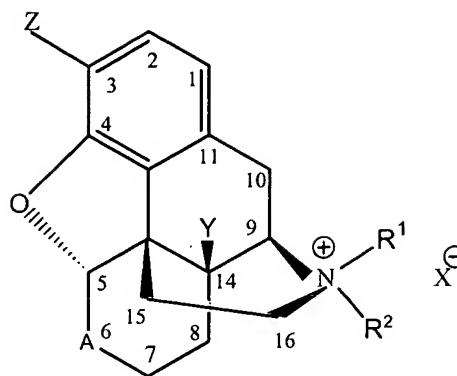
[0018] In one embodiment, the ternary morphinan alkaloid base is represented by Formula 2 and the product is represented by ~~Formula 2A~~. **Formula 2A:**

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<sup>1</sup> Applicants note that reference is made to the published application (US 2006/0014771) when amending the specification.



Formula 2



Formula 2A

wherein

Please replace paragraph [0019] with the following amended paragraph:

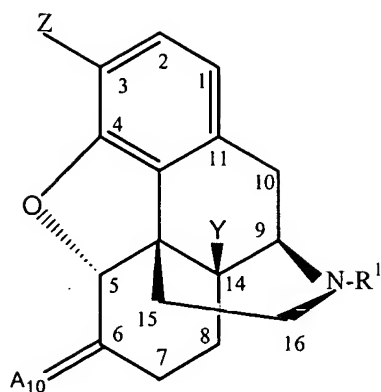
**[0019]** A is -C(O)-, -C(S)-, -C(=CH<sub>2</sub>)-, or **[[-CHA<sub>1</sub>-]] -CH(A<sub>1</sub>)-**,

Please replace paragraph [0022] with the following amended paragraph:

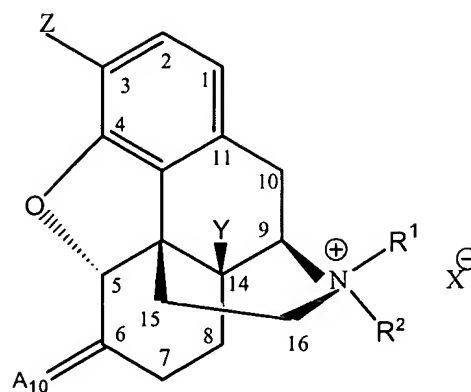
**[0022]** R<sup>2</sup> is hydrocarbyl or substituted hydrocarbyl, **[[and]]**

Please replace paragraph [0025] with the following amended paragraph:

**[0025]** Z is hydroxyl, alkoxy, or acyloxy. Representative ternary morphinan alkaloids falling within the scope of Formula 2 include naltrexone ((5 $\alpha$ )-17-(cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxymorphinan-6-one), oxymorphone ((5 $\alpha$ )-4,5-epoxy-3,14-dihydroxy-17-methylmorphinan-6-one), oxycodone ((5 $\alpha$ )-4,5-epoxy-14-hydroxy-3-methoxy-17-methylmorphinan-6-one), hydromorphone ((5 $\alpha$ )-4,5-epoxy-3-hydroxy-17-methylmorphinan-6-one), naloxone ((5 $\alpha$ )-4,5-epoxy-3,14-dihydroxy-17-(2-propenyl)morphinan-6-one), nalmefene ((5 $\alpha$ )-17-(cyclopropylmethyl)-4,5-epoxy-6-methylenemorphinan-3,14-diol) and nalbuphine ((5 $\alpha$ )-17-(cyclobutylmethyl)-4,5-epoxymorphinan-3,6,14-triol). Preferred ternary morphinan alkaloids and quaternary derivatives thereof falling within the scope of Formulae 2 and 2A correspond to **Formulae 2' and 2A'**:

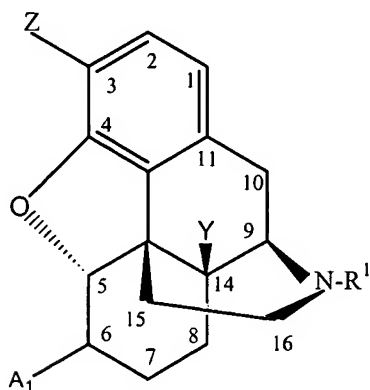


Formula 2'

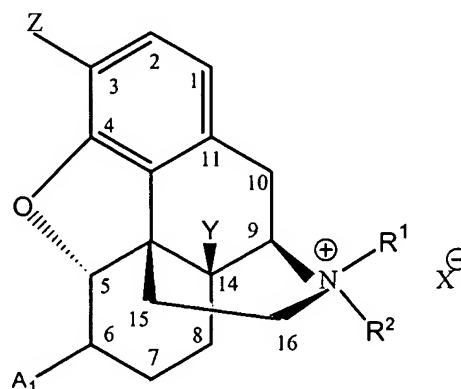


Formula 2A'

wherein R<sup>1</sup>, R<sup>2</sup>, X<sup>-</sup>, Y and Z are as defined in connection with Formulae 2 and 2A and A<sub>10</sub> is oxygen, sulfur or methylene; in one embodiment, A<sub>10</sub> is preferably oxygen or methylene. Ternary morphinan alkaloids falling within the scope of Formula 2' include naltrexone, oxymorphone, oxycodone, hydromorphone, naloxone, and nalmeferene. Other preferred ternary morphinan alkaloids and quaternary derivatives thereof falling within the scope of Formulae 2 and 2A correspond to ~~Formulae 2'' and 2A''~~. **Formulae 2'' and 2A''**:



Formula 2''

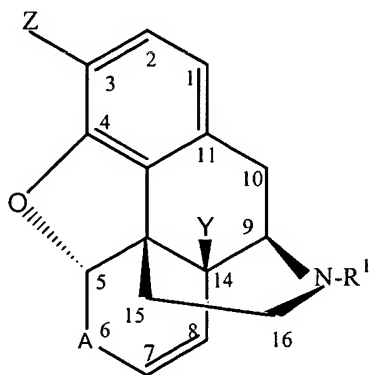


Formula 2A''

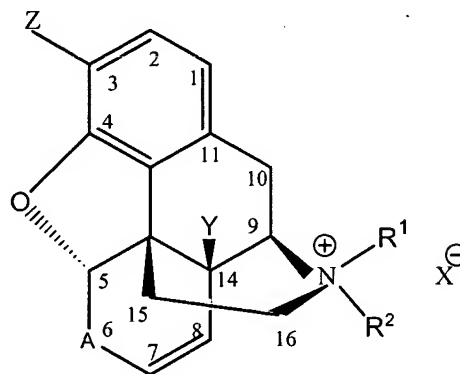
wherein R<sup>1</sup>, R<sup>2</sup>, X<sup>-</sup>, Y and Z are as defined in connection with Formulae 2 and 2A and A<sub>1</sub> is hydroxy, alkoxy or acyloxy. Ternary morphinan alkaloids and falling within the scope of Formulae 2'' include nalbuphine.

Please replace paragraph [0026] with the following amended paragraph:

[0026] In one embodiment, the ternary morphinan alkaloid base is represented by Formula 3 and the product is represented by ~~Formula 3A~~. **Formula 3A:**



Formula 3



Formula 3A

wherein

Please replace paragraph [0027] with the following amended paragraph:

[0027] A is -C(O)-, -C(S)-, -C(=CH<sub>2</sub>)-, or ~~[[ -CHA<sub>1</sub>- ]]~~ **-CH(A<sub>1</sub>)-**,

Please replace paragraph [0030] with the following amended paragraph:

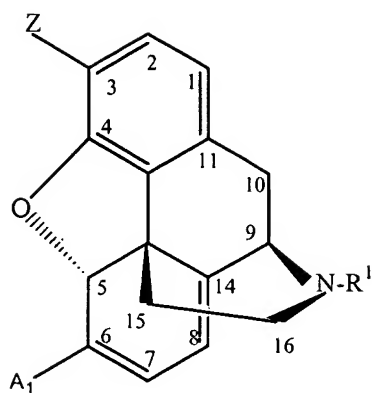
[0030] R<sup>2</sup> is hydrocarbyl or substituted hydrocarbyl, ~~[[and]]~~

Please replace paragraph [0032] with the following amended paragraph:

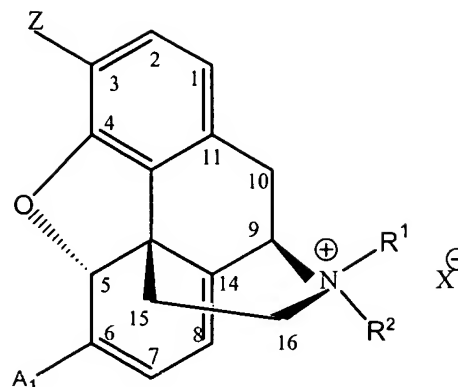
[0032] Y~~[[,]]~~ is ~~[[H]]~~ **hydrogen**, hydroxy, alkoxy, or acyloxy, and

Please replace paragraph [0034] with the following amended paragraph:

[0034] In another embodiment, the ternary morphinan alkaloid base is represented by Formula 4 and the product is represented by ~~Formula 4A~~. **Formula 4A:**



Formula 4



Formula 4A

wherein

Please replace paragraph **[0037]** with the following amended paragraph:

**[0037]** R<sup>2</sup> is hydrocarbyl or substituted hydrocarbyl, **[[and]]**

Please replace paragraph **[0050]** with the following amended paragraph:

**[0050]** As used herein, "Ac" means acetyl, "Bn" means benzyl, "Bs" means ~~bresyl~~ **brosyl**, "Bz" means benzoyl, "Ms" means mesyl, "THP" means tetrahydropyranyl, and "Ts" means tosyl.

Please replace paragraph **[0054]** with the following amended paragraph:

**[0054]** Unless otherwise indicated, the alkyl groups described herein are preferably lower alkyl containing from one to eight carbon atoms in the principal chain. They may be straight or branched chain or cyclic and include methyl, ethyl, propyl, isopropyl, ~~allyl,~~ ~~benzyl,~~ hexyl and the like.

Please replace paragraph **[0055]** with the following amended paragraph:

**[0055]** Unless otherwise indicated, the alkenyl groups described herein are preferably lower alkenyl containing from two to eight carbon atoms in the principal chain and up to

20 carbon atoms. They may be straight or branched chain or cyclic and include allyl, benzyl, ethenyl, propenyl, isopropenyl, butenyl, isobutenyl, hexenyl, and the like.